

REMARKS

Claims 1, 3-10, 12-20, 28-34, and 36 remain pending in the present application as amended. All claims have been finally rejected. Independent claims 1, 12, 28, and 36 have been amended. Claims 2, 11, 22-27, and 35 have been canceled. Applicants respectfully submit that no new matter has been added to the application by the after-Final Amendment.

Telephone Conversation With Examiners

Applicants' representative thanks Examiner Truong and Examiner Pan for the telephone conversation conducted on January 24, 2008. Proposed claim amendments were discussed. Examiners agreed to consider the claim amendments in view of arguments made during the conversation.

Additionally, Examiner Truong pointed out that in view of the most recent meetings held at the USPTO concerning 35 U.S.C. § 101 rejections, claims reciting a "computer-readable storage medium" are being considered to include a carrier wave when viewed in light of the specification. Specifically, paragraph [0030] of Applicants' application was cited with respect to claim 36. Accordingly, although claim 36 has not been rejected under 35 U.S.C. § 101, paragraph [0030] will be addressed herein.

Discussion Of Paragraph [0030]

Paragraph [0030] of Applicants' original application is reproduced below.

[0030] The computer 110 typically includes a variety of computer readable media. Computer readable media can be any available media that can be accessed by the computer 110 and includes both volatile and nonvolatile media, and removable and non-removable media. By way of example, and not limitation, computer readable media may comprise computer storage media and communication media. Computer storage media includes volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information such as computer readable instructions, data structures, program modules or other data. Computer storage media includes,

but is not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical disk storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store the desired information and which can be accessed by the computer 110. Communication media typically embodies computer readable instructions, data structures, program modules or other data in a modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media. The term "modulated data signal" means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal. By way of example, and not limitation, communication media includes wired media such as a wired network or direct-wired connection, and wireless media such as acoustic, RF, infrared and other wireless media. Combinations of the any of the above are also included within the scope of computer readable media.

As explained in paragraph [0030], "computer readable media may comprise computer storage media and communication media." Thus, computer readable media can comprise two types of media: (1) storage media and (2) communication media. Each of the two types of media is described separately. And, as described in paragraph [0030], only communication media comprises a carrier wave. Storage media are not described as comprising carrier waves. Thus, paragraph [0030] distinguishes storage media from carrier media, and only carrier media is described as comprising a carrier wave.

Accordingly, it is not understood how a claim directed to a computer-readable storage medium can be construed to include a carrier wave when interpreted in view of paragraph [0030].

Claim Objections

Preliminarily, Examiner has objected to claim 12 for the reason that such claim recites processing the digital object in response to receiving the REJECT response, even though the specification sets forth at about paragraph 0013 that the digital object is removed in response to a reject response. Accordingly, Applicants have amended claim 12 to recite that such

processing entails altering an attribute associated with the digital object such that the digital object is not forwarded to the receiver as if an ACCEPT response were received from the cancellation server. Moreover, Applicants respectfully point out that paragraph 0013 is part of a summary of the application. In the detailed description portion of the application, it is further explained that other alternatives exist, including the alternatives recited in claims 13-15. As a result, Applicants respectfully request reconsideration and withdrawal of the objection to claim 12.

Claim Rejections

Examiner has rejected the claims under 35 USC § 103 as being obvious over Juels et al. (U.S. Patent No. 7,197,639 B1) in view of Landsman et al. (U.S. Pub. No. 200510055410 A1). Applicants respectfully traverse the § 103 rejection insofar as it may be applied to the claims as amended.

Independent claim 1 of the present application as amended recites a cancellation server of a digital delivery system, where the cancellation server is communicatively coupled to at least one database. The server receives an identifier associated with a cryptographic puzzle, where the puzzle is attached to a digital object that is an electronic mail message intended for delivery from a sender to a recipient that is distinct from the sender. The server validates the identifier by verifying that the identifier does not exist in the at least one database. Upon validating, the server cancels the cryptographic puzzle and stores in the at least one database an entry comprising the identifier or information derived from the identifier. In addition, the server transmits to the recipient an ACCEPT response if the identifier is validated.

Independent claim 12 recites similar subject matter, albeit from the point of view of a puzzle checker associated with the recipient. Here, though, a REJECT response is received from the cancellation server as a result of the identifier being already present in a database of the cancellation server, and the checker processes the digital object by altering an attribute associated with the digital object such that the digital object is not forwarded to the receiver as if an ACCEPT response were received from the cancellation server.

Independent claim 28 recites a method akin to that recited in claim 1, albeit without any specific reference to a cancellation server. Independent claim 36 recites a computer-readable medium having instructions that implement a method akin to that of claim 28.

Accordingly, as amended, the independent claims of the present application emphasize that a sender sends to a recipient distinct from the sender a digital object that is an electronic mail message, and also that the server transmits to the recipient who is distinct from the sender an ACCEPT response if the identifier is validated. The mail message is only accepted for delivery to the recipient if the message (among other things) includes an identifier that is not in a cancellation database. As set forth in the specification of the present application, such an identification is of a puzzle that was solved in connection with the mail message by the sender. As should be understood, the identification is canceled so that the identification and the corresponding puzzle can only be used once. Thus, the sender must newly solve a puzzle for each email sent thereby, and is thus hindered from sending each email without some effort. As a result, ‘spam’ email is reduced inasmuch as the cost of each piece of spam email is no longer insignificant.

The Juels reference discloses the use of similar puzzles, but in the context of preventing a malicious entity from monopolizing a resource such as a server connection. In particular, in the Juels reference, a request for a slot is accompanied by a solved puzzle with an identifier that is employed to derive an address for such a ‘slot’. As a result, a subsequent request for a slot based on the same solved puzzle will derive the same address, and the request will be denied based on the slot of the address already being in use. Notably, the Juels reference does not disclose or even suggest that a puzzle is attached to an electronic mail message sent from a sender to a recipient distinct from the sender, as is recited in claims 1, 12, 28, and 36, and also that in response to a message from a sender to a recipient distinct from the sender, a server or the like transmits to the distinct recipient an ACCEPT response if the identifier is validated, as is also recited in claims 1, 28, and 36, or a REJECT response to a puzzle checker associated with the recipient, as is also recited in claim 12.

Instead, and as the Examiner points out, in the Juels reference, the server 120 may send a negative acknowledgement 295 in response to a client 110, where the client 110 is the

sender (requester) and not the recipient of a message distinct from such a sender. In fact, in the context of acknowledgment 295, the client 110 is requesting access to a resource and is not sending any electronic mail message to any recipient which would be distinct from the requester, as is required by the claims of the present application. Thus, the acknowledgment 295 is not disclosed or even suggested as being sent to any such recipient that is distinct from the sending client 110, as is required by claims 1, 12, 28, and 36.

The Examiner points to the Landsman reference primarily for the teaching of the use of a database. However, like the Juels reference, the Landsman reference does not at all appreciate that a puzzle is attached to an electronic mail message sent from a sender to a recipient distinct from the sender, as is recited in claims 1, 12, 28, and 36, and also that in response to a message from a sender to a recipient distinct from the sender, a server or the like transmits to the distinct recipient an ACCEPT response if the identifier is validated, as is also recited in claims 1, 28, and 36, or a REJECT response to a puzzle checker associated with the recipient, as is also recited in claim 12.

Moreover, neither the Jules nor the Landsman references appreciates that a puzzle with an identifier should or could be employed in connection with a mail message that is only accepted for delivery to the recipient if the identifier is not in a cancellation database. In particular, neither reference appreciates that by doing so, the sender must newly solve a puzzle for each email sent thereby, and is thus hindered from sending each email without some effort. As a result, ‘spam’ email is reduced inasmuch as the cost of each piece of spam email is no longer insignificant.

Accordingly, and for all of the aforementioned reasons, Applicants respectfully submit that the Juels and Landsman references cannot be combined to make obvious the subject matter of claims 1, 12, 28, and 36 as amended and all claims depending therefrom, including claims 3-10, 13-20, and 29-34. Accordingly, Applicants respectfully submit that such claims as amended are not obvious in view of the cited references, and respectfully request reconsideration and withdrawal of the § 103 rejection.

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CONCLUSION

In view of the foregoing after-Final Amendment and Remarks, Applicants respectfully submit the present application including claims 1, 3-10, 12-20, 28-34, and 36 is in condition for allowance, and such action is respectfully requested.

Respectfully Submitted,

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